

WHAT IS CLAIMED IS:

1. A method of chemical mechanical polishing comprising the steps of:

supplying a slurry; and

5 polishing an object with particles contained in the slurry, wherein the polishing step including a step of controlling a physical quantity, which is a determinant factor of a polishing speed with respect to the object, based on information on the particles contained in the slurry.

10 2. The method of chemical mechanical polishing according to claim 1, wherein a target polishing speed is set according to the type or quality of the surface film of the object to be polished, and the physical quantity is controlled such  
15 that the target polishing speed becomes constant.

3. A method of chemical mechanical polishing comprising the steps of:

supplying a slurry; and

20 polishing an object with particles contained in the slurry, wherein the polishing step including a step of controlling a polishing time based on information on the particles contained in the slurry.

4. An apparatus for chemical mechanical polishing comprising:

a first slurry supplying unit which supplies a first slurry;

5 a second slurry supplying unit which supplies a second slurry;

a polishing unit which receives the first slurry from said first slurry supplying unit and the second slurry from said second slurry supplying unit and polishes an object  
10 with particles contained in the slurry; and

a control unit which controls supply of slurry from said first slurry supplying unit and said second slurry supplying unit to said polishing unit according to a polishing speed with respect to the object to be polished.

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5. An apparatus for chemical mechanical polishing comprising:

a first slurry supplying unit which supplies a first slurry;

20 a second slurry supplying unit which supplies a second slurry;

a polishing unit which receives the first slurry from said first slurry supplying unit and the second slurry from said second slurry supplying unit and polishes an object  
25 with particles contained in the slurry; and

a control unit which controls supply of slurry from said first slurry supplying unit and said second slurry supplying unit to said polishing unit according to the type or quality of the surface film of the object.

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6. An apparatus for chemical mechanical polishing comprising:

a slurry supplying unit;

10 a polishing unit which receives the slurry from said slurry supplying unit and polishes an object with particles contained in the slurry;

a polishing particle information acquiring unit which acquires information on the particles contained in the slurry to be supplied to said polishing unit; and

15 a polishing and driving controlling unit which controls a physical quantity, which is a determinant factor of a polishing speed with respect to the object, based on the information on the particles acquired by said polishing particle information acquiring unit.

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7. The apparatus according to claim 6, wherein said slurry supplying unit includes a first slurry supplying unit which supplies a first slurry; and a second slurry supplying unit which supplies a second slurry, and

25 said apparatus further comprising a mixture slurry

supplying unit which receives and mixes the first slurry supplied by said first slurry supplying unit with the second slurry supplied by said second slurry supplying unit and supplies the mixed slurry to said polishing unit.

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8. The apparatus according to claim 7, further comprising:

10 a mixture ratio controlling unit which controls a ratio of the quantities of the first slurry and the second slurry when mixing them based on the information on the particles acquired by said polishing particle information acquiring unit.

15 9. An apparatus for chemical mechanical polishing comprising:

a slurry supplying unit;

a polishing unit which receives the slurry from said slurry supplying unit and polishes an object with particles contained in the slurry;

20 a polishing particle information acquiring unit which acquires information on the particles contained in the slurry to be supplied to said polishing unit; and

a polishing and driving controlling unit which controls a polishing time based on the information on the  
25 particles acquired by said polishing particle information

acquiring unit.

10. The apparatus according to claim 9, wherein said slurry  
supplying unit includes a first slurry supplying unit which  
5 supplies a first slurry; and a second slurry supplying unit  
which supplies a second slurry, and

said apparatus further comprising a mixture slurry  
supplying unit which receives and mixes the first slurry  
supplied by said first slurry supplying unit with the second  
10 slurry supplied by said second slurry supplying unit and  
supplies the mixed slurry to said polishing unit.

11. The apparatus according to claim 10, further  
comprising:

15 a mixture ratio controlling unit which controls a ratio  
of the quantities of the first slurry and the second slurry  
when mixing them based on the information on the particles  
acquired by said polishing particle information acquiring  
unit.

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12. An apparatus for chemical mechanical polishing  
comprising:

a first slurry supplying unit which supplies a first  
slurry;

25 a second slurry supplying unit which supplies a second

slurry;

a mixture slurry supplying unit which receives and mixes the first slurry supplied by said first slurry supplying unit with the second slurry supplied by said second  
5 slurry supplying unit;

a polishing unit which receives the mixture of slurries from said mixture slurry supplying unit and polishes an object with particles contained mixture of slurries;

a polishing speed detecting unit which detects a  
10 polishing speed with respect to the object; and

a mixture ratio controlling unit which controls said first slurry supplying unit and said second slurry supplying unit so as to control a ratio of the quantities of the first slurry and the second slurry, when supplying them to said  
15 mixture slurry supplying unit for mixing, based on the polishing speed detected by said polishing speed detecting unit.

13. An apparatus for chemical mechanical polishing  
20 comprising:

a first slurry supplying unit which supplies a first slurry;

a second slurry supplying unit which supplies a second slurry;

25 a mixture slurry supplying unit which receives and

mixes the first slurry supplied by said first slurry  
supplying unit with the second slurry supplied by said second  
slurry supplying unit;

5 a polishing unit which receives the mixture of slurries  
from said mixture slurry supplying unit and polishes an  
object with particles contained mixture of slurries;

a polishing particle information acquiring unit which  
acquires information on the particles contained in the  
mixture slurry to be supplied to said polishing unit; and

10 a mixture ratio controlling unit which controls said  
first slurry supplying unit and said second slurry supplying  
unit so as to control a ratio of the quantities of the first  
slurry and the second slurry, when supplying them to said  
mixture slurry supplying unit for mixing, based on the  
15 information on the particles acquired by said polishing  
particle information acquiring unit.